

## On some Pseudoscorpions from Japan

collected by Hans Sauter.

By

Edv. Ellingsen

Kragerø (Norway).

Our knowledge regarding the Pseudoscorpions of Japan has, until now been limited to two species, *Chelifer bicarinatus* E. SIMON, and *Ch. boncicus* KARSCH. The collections made during the last two years — 1904, 1905 — by Mr. HANS SAUTER, have therefore been of great interest. Besides the two species mentioned above, the collections contained 8 more species of which no less than seven had to be described as new. The occurrence of the genus *Microcreagris* is interesting though not surprising, only one species from China, *Micr. gigas* Balzan, being hitherto known. Besides a variety of this, two new species of the genus were present in the collections.

The localities where Mr. SAUTER took the animals, are the following:

*Kanagawa*, a small town, north of Yokohama.

*Kuenji*, a Buddhist monastery in the province of Koshu or Kai, north of Shizuoka.

*Negishi*, a village, south of Yokohama.

*Okayama*, the capital of the province of Bizen.

*Ooyama*, a mountain in the province of Sagami.

*Takakiyama*, a hill near Kanagawa.

*Yamanaka*, a village in the province of Suruga, on the western declivity of the Hakone Mountains.

**Genus *Chelifer*.***Subgenus Trachychernes.**Chelifer boncicus* KARSCH.

1881. *Chelifer boncicus* KARSCH, Diagnoses Arachnoidarum Japoniae, p. 37.

No eyes, but feeble ocular spots present.

Colour. The anterior part of cephalothorax and the sclerites brown, the posterior half of cephalothorax paler; palps dark reddish brown; the legs and the interstitial parts palish brown.

Cephalothorax about as long as it is wide, flattened, the posterior half nearly parallel-sided, the anterior part broadly and regularly rounded; the anterior transversal groove not very conspicuous, visible only towards the sides, the posterior groove hardly visible. The surface distinctly granulated, nearly opaque. The hairs short, thick, somewhat obtuse and slightly dentated.

Abdomen. The tergites distinctly granulated (or rather shagreened) and somewhat glossy, all divided longitudinally, the last tergite, however, only in front; along the hinder margins rows of hairs like those of cephalothorax, on the posterior tergites somewhat longer and more pointed with some long, pointed "tactile hairs" intermixed. The sternites shagreened, glossy, divided longitudinally, except the last one. The hairs pointed.

Palps about as long as the body, rather robust. Coxa slightly shagreened and glossy. The other joints are glossy and distinctly granulated, but the granulation of the hand is very inconspicuous; the fingers smooth; the hairs moderately long, some of them rather obtuse, on the outer sides of the palps and towards the extremity somewhat pointed, partly dentated; the hairs of the fingers pointed. — Trochanter with a short and robust stalk, roundish, the inner side very convex, with two rounded protuberances behind on the upper and the lower edge, separated by a longitudinal groove. Femur with a short, but distinct stalk, robust, most of the inner side somewhat convex, towards the extremity somewhat concave, the outer side roundly widened from the

stalk, and then moderately and regularly convex. Tibia with a distinct and robust stalk, the inner side much swollen, the outer side slightly convex from the base, more convex towards the extremity. Hand with a short stalk, the base somewhat obliquely truncated, not much broader than the tibia, the inner side slightly, the outer very slightly convex, both sides passing somewhat obliquely into the fingers. Fingers considerably curved, robust, somewhat shorter than the hand, somewhat gaping; on the outer side of each finger 5 to 6 conical teeth.

Mandibles. Galea in male small, in female somewhat larger, in both cases with some teeth in and near the extremity.

Legs with some dentated and some pointed hairs; the femora of the two posterior pairs of legs moderately robust. Claws simple.

Length. 2.4 mm., ♂ and ♀ of about the same size.

Measurements.

♂ cephalothorax: long. 0.80; lat. behind 0.83. Femur: long. 0.72; lat. 0.27. Tibia: long. 0.57; lat. 0.31. Hand: long. 0.72; lat. 0.37. Fingers: long. 0.57 mm.

♀ cephalothorax: long. 0.80; lat. behind 0.84. Femur: long. 0.69; lat. 0.27. Tibia: long. 0.59; lat. 0.31. Hand: long. 0.73; lat. 0.39. Fingers: long. 0.57 mm.

The measurements, it will be seen, are nearly identical for the two sexes; with the exception of the sexual organs, there is on the whole, very little difference between male and female in this species.

Locality. Yamanaka, March, 1905. 10 specimens, 4 ♂, 3 ♀, 3 young.

Note. I have compared these specimens with the type in the Zoological Museum of Berlin.

### *Subgenus Chelifer s. s.*

#### *Chelifer bicarinatus* E. SIMON.

1878. *Lophochernes bicarinatus* E. SIMON, Bull. Soc. Zool. France, III, p. 66.

♂: Length 1.9 mm.

Measurements. Cephalothorax: long. 0.61; lat. 0.50. Femur:

long. 0.64; lat. 0.14. Tibia: long. 0.57; lat. 0.14. Hand: long. 0.44; lat. 0.24. Fingers: long. 0.50 mm.

Locality. Kanagawa, July, 1905, 1 specimen ♂.

The description of the species was given from a specimen found in Paris, living in a box that had arrived direct from Japan. The finding of this species in Japan is very interesting, thus confirming the supposition expressed by E. SIMON, that the animal belonged to the Japanese fauna. Both of the two specimens known are males. There is no reason for supporting the new genus, established by SIMON for this species.

*Chelifer Sauteri* nov. sp.

Two large, distinct eyes, one on each side.

Cephalothorax, sclerites and palps brown, legs and interstitial parts greyish white.

Cephalothorax longer than it is broad behind, granulated and somewhat glossy; the posterior half nearly parallel-sided, anteriorly rounded, the front margin slightly convex. Two transversal grooves, the anterior one very distinct, nearly straight and about in the middle; the central part of the posterior groove curves slightly backwards, but is not very clearly defined, and is near the hinder margin. The surface is provided with some very short, obtuse hairs.

Abdomen. The tergites distinctly granulated, somewhat opaque, all divided longitudinally except the last one, which however, is partly divided; along the hinder margins are rows of short, slightly pointed hairs. The sternites slightly granulated, somewhat glossy, all divided longitudinally; the hairs longer and more acute than on the tergites; on the last somite some longer, pointed hairs intermixed. The sexual organs of the male exhibit a remarkable feature, having on each side of the sexual aperture two elongate, oviform shields.

Palps about as long as the body, slender. Coxa minutely granulated and rather glossy. The other parts are more or less

glossy and distinctly granulated, except the fingers; the hairs short, slightly dentated, obtuse, becoming more and more pointed distally, as they do on the fingers. — Trochanter with a rather long stalk, but with the exception of this about as long as it is broad; the inner side very convex, with two rounded protuberances behind on the upper and the lower edge. Femur with a short stalk, slender, the inner side nearly straight, only slightly sinuated next to the extremity, gradually widening behind, the greater central part of the outer side nearly straight, at the extremity somewhat rounded; the femur, on the whole, gradually increases in width towards the extremity. Tibia with a short stalk, shorter and broader than femur, the inner side somewhat convex, the greater, proximal part rather straight behind, somewhat convex towards the extremity. Hand with a distinct stalk, with regularly rounded base, both sides regularly and moderately convex — in the male somewhat more so than in the female — gradually passing into the fingers. Fingers distinctly curved, about as long as the hand or a little longer.

Mandibles. Galea of the female rather robust with some distinct teeth in the distal third part; in the male considerably more slender, indistinctly dentated at the extremity.

Legs with obtuse, slightly dentated hairs; the femora of the two posterior pairs of legs moderately strong.

The shape of the coxæ of the posterior pair of legs it very characteristic in the male, being very elongate and much curved. Claws simple.

Length: ♂ 1.93 mm.; ♀ 2.10 mm.

Measurements.

♂: Cephalothorax: long. 0.64; lat. behind 0.54. Femur: long. 0.60; lat. 0.19. Tibia: long. 0.50; lat. 0.23. Hand: long. 0.44; lat. 0.30. Fingers: long. 0.50 mm.

♀: Cephalothorax: long. 0.70; lat. behind 0.57. Femur: long. 0.61; lat. 0.17. Tibia: long. 0.50; lat. 0.21. Hand: long. 0.53; lat. 0.30. Fingers: long. 0.51 mm.

Locality. Okayama, September, 1904, 3 specimens, 2 ♂, 1 ♀.

Genus *Ideobisium* BALZAN.

There was one specimen of the genus *Ideobisium* in the collection, taken at Ooyama; but the animal was too young to be either determined or described.

Genus *Microcreagris* BALZAN.

It may be rather difficult to support the genus *Microcreagris*, as there is little difference between this genus and the subgenus *Ideobisium* s. s. of the genus *Ideobisium*. The new Japanese species prove that BALZAN's characters for the genus may vary; the cephalothorax is not always somewhat square, but may be longer than it is wide. The mandibles are not always of the same length as the cephalothorax, but may be shorter. BALZAN gave as a differential character of *Ideobisium* and *Microcreagris*, that in the former genus the galea should be simple, without teeth or branches, and in the latter it is branched; but this is no longer the case, for *Ideobisium* (*Ideoblothrus*) *Strandi* ELLINGSEN, from Norway, has a branched galea. The solution of the question should, however be postponed until more species of the two genera are known.

The three (or four) known forms of *Microcreagris* may be distinguished from each other in the following manner:

- |                                       |   |
|---------------------------------------|---|
| Femur quite smooth . . . . .          | 1 |
| Femur distinctly granulated . . . . . | 2 |
1. Large species (7.1 mm.), galea with only some small teeth at the extremity, cephalothorax as long as it is broad, front margin of ceph. with a large tooth . *M. gigas* BALZAN.  
Considerably smaller (about 4 mm.), galea sometimes has branches with teeth, ceph. sometimes longer than it is wide, front margin of ceph. with a small tooth  
*M. gigas* BALZ. var *japonica* Ell.
  2. Species of moderate size (about 4 mm.), femur robust, tibia subglobose, fingers scarcely longer than hand, galea with two dentated branches springing from the middle  
*M. granulata* Ell.

Species of small size (about 2 mm.), femur slender, tibia elongate, fingers considerably longer than hand, galea divided nearly from the base into simple branches

*M. pygmaea* Ell.

*Microcreagris gigas* BALZAN

var. *japonica* nov.

The following particulars may be added to BALZAN's description: the sclerites are very minutely shagreened, the palps nearly smooth, only the hand somewhat shagreened.

The variety is of considerably smaller size than the typical species, being only about 4 mm.; but it must be added that the abdomen is much contracted, and it may be that BALZAN's type (more than 7 mm. long) has had the abdomen extended. — This species, or at least the variety, is in some respects somewhat variable. The stalk of the femur may be more or less distinct (according to BALZAN, the outer margin of the femur passes without interruption into the stalk). The cephalothorax may be somewhat longer than it is wide; but the galea, in particular, varies considerably; it may, as in the type, consist of a trunk and two pairs of small teeth at the extremity, but it may also be provided with branches, or rather be divided from midway into two branches, and these provided with long or short teeth. Further, in the variety, the tooth of the front margin of the cephalothorax is rather small.

Localities. Yamataka, March, 1905, 6 specimens; Okayama, May, 1904, 6 specimens; Takakiyama, March, 1905, 1 specimen; Ooyama, September, 1905, 1 specimen; Kuenji, August, 1905, 1 specimen.

*Microcreagris granulata*, nov. sp.

Four large eyes, two on each side, placed near each other, the anterior one more than a diameter from the front margin.

Cephalothorax and palps reddish brown, the sclerites olivaceous brown, the legs and the interstitial parts pale yellowish brown.

Cephalothorax longer than it is broad, smooth and glossy, but may also be minutely shagreened along the hinder margin and on the slope of the lateral margins. There is sometimes a slight trace of a transversal depression near the hinder margin; in one of the largest specimens there is also a faint, dark, longitudinal depression from about the middle for some distance forwards. The lateral margins are nearly parallel up to the eyes, in front of which the cephalothorax is somewhat contracted, the front margin from the middle being somewhat oblique, and in the middle provided with a small tooth. The surface is covered with scattered, rather long, pointed hairs.

Abdomen. The tergites and the sternites glossy, distinctly, though rather minutely, shagreened, with rows of long, pointed hairs along the hinder margins.

Palps robust, glossy. Coxa and trochanter smooth; femur very distinctly granulated on the upper and inner sides, tibia and hand less distinctly granulated. The hairs of the palps are in part long and pointed; on the hand and the fingers there are some very long ones here and there. — Trochanter with a very short stalk, the inner side only a little convex, a little gibbous behind in the middle. Femur with a short and robust stalk, the inner side of the proximal half slightly convex, that of the distal half slightly concave, distinctly convex behind at the base and the extremity, the exterior margin very slightly convex, or nearly straight; femur in all nearly parallel-sided, narrowing only very slightly towards the extremity, and rather robust. Tibia with a long, robust, pronounced stalk, somewhat broader than the femur, and with the exception of the stalk, subglobose; the inner side widening abruptly from the stalk, and very convex, particularly near the base, regularly and moderately convex behind. Hand with a short and robust stalk, with the base somewhat obliquely rounded, the outer side somewhat convex, the inner side more so, broader than the tibia, gradually passing into the fingers. Fingers about as long as the hand, slightly



curved, robust, the fixed finger most so; each finger on the inner margin with a dense row of small, low, truncated teeth.

Mandibles robust; galea branched, in adult specimens generally with two branches springing from the middle, these branches being provided with several long or short teeth; in younger specimens the galea is more simple, and with only some teeth at the extremity.

Legs with long, pointed hairs, the femora of the two posterior pairs of legs very broad. Claws simple.

Length of the largest specimens nearly 4 mm., but the abdomen is much contracted.

Measurements. Cephalothorax: long. 1.00; lat. 0.89. Mandibles: long. 0.64. Femur: long. 1.07; lat. 0.36. Tibia: long. 0.86 (the stalk 0.22); lat. 0.47. Hand: long. 0.93; lat. 0.69. Fingers: long. 1.00 mm.

Locality. Yamanaka, March, 1905, 11 specimens.

*Microcreagris pygmaea*, nov. sp.

Four eyes, two on each side, placed near to each other, the anterior one about a diameter from the front margin.

Cephalothorax reddish brown, the sclerites olivaceous brown, palps light reddish, legs and the interstitial parts whitish.

Cephalothorax scarcely longer than it is wide, smooth and glossy, only minutely shagreened along the hinder margin. There is generally a slight transversal depression near the hinder margin. The lateral margins are nearly parallel up to the eyes, in front of which they converge a little; the front margin, from the middle, slightly oblique; on the front margin scarcely any tooth. The surface covered with scattered, rather long, pointed hairs.

Abdomen. Tergites and sternites glossy, distinctly, though rather minutely, shagreened, with rows of long, pointed hairs along the hinder margins.

Palps slender, about as long as the body, glossy, more or less granulated, except the coxa, the trochanter, the lower and

outer sides of the femur, the outer side of the tibia, and the fingers, these being smooth. The hairs of the palps long and pointed. — Trochanter with a short stalk, about as long as it is broad, the inner side slightly convex, with a small, rounded protuberance behind in the middle. Femur slender, with a short, but distinct stalk, the greater part of the inner side slightly convex, the smaller distal part slightly concave; the outer side nearly straight or even slightly sinuated, somewhat rounded at the base and the extremity; the femur on the whole is rather parallel-sided. Tibia with a moderately long, robust stalk, considerably shorter than the femur, and with the exception of the stalk, oblong, scarcely narrowing towards the extremity, regularly and moderately convex behind, the inner side widening from the stalk, and moderately convex. Hand with a short stalk, with the base somewhat obliquely rounded, moderately convex on both sides, most so on the inner side, gradually passing into the fingers. Fingers considerably longer than the hand, slender, slightly curved.

Mandibles moderately robust, slightly shagreened; galea consisting of four straight, simple stemlets, of equal length, and forming a fan, only indistinctly united near the base.

Legs with short, scattered hairs; the femora of the two posterior pairs rather broad. Claws simple.

Length 2.05 mm.

Measurements. Cephalothorax: long. 0.61; lat. 0.57. Mandibles: long. 0.29. Femur: long. 0.54; lat. 0.16. Tibia; long. 0.40; lat. 0.20. Hand: long. 0.43; lat. 0.29. Fingers: long. 0.53 mm.

Locality. Yamanaka, March, 1905, 8 specimens.

### *Genus Obisium.*

#### *Subgenus Roncus.*

*Obisium japonicum*, nov. sp.

Two small eyes, one on each side, about two diameters from the front margin.

Colour. Sclerites pale greyish brown, cephalothorax, mandibles and palps pale reddish yellow, legs and interstitial parts whitish.

Cephalothorax longer than it is wide, nearly parallel-sided up to the eyes, the lateral margins, however, being slightly convex, a little narrower in front of the eyes, the front margin from the middle slightly oblique, with a large tooth in the middle. The surface smooth and glossy with scattered, long, pointed hairs.

Abdomen. Tergites and sternites glossy, slightly striped, with rows of long, pointed hairs along, the hinder margins.

Palps about as long as the body, slender. Coxa smooth and glossy. The other joints of the palps are more or less granulated, except the lower sides of the trochanter and tibia, and the fingers, the femur being most granulated. The palps are densely clothed with long, pointed hairs, somewhat longer on the inner than on the outer side. — Trochanter stalked, considerably longer than it is broad, the inner side very slightly convex, nearly straight behind, the whole nearly parallel-sided. Femur slender, with a distinct stalk, the inner side nearly straight, though slightly sinuated towards the extremity, the outer side passing gradually from the stalk and nearly straight, the whole slightly increasing in width towards the extremity. Tibia with a rather long stalk, the inner side regularly convex, the proximal part of the outer side nearly straight, somewhat convex towards the extremity, in all scarcely narrowing at the extremity. Hand with a short stalk, with the base obliquely rounded, the outer side nearly straight, the inner side very convex, gradually passing into the fingers. Fingers slender, slightly curved, considerably longer than the hand, with a dense row of low, obliquely truncated teeth, on the inner margins.

Mandibles. The fingers slender, long, crossing each other very much when the pincers are shut, with no protuberance on the outer side of the moveable finger; the moveable finger of

the male has on the inner side, in addition to the usual small teeth, some larger teeth in the middle; this being much less pronounced in the females.

Legs with long, pointed hairs; the femora of the two posterior pairs moderately robust. The outer corner of the coxa of the 1st pair with a very marked, pointed protuberance. Claws simple.

Length 3.2 mm.

Measurements. Cephalothorax: long. 0.74; lat. 0.59. Mandibles: long. 0.46. Trochanter: long. 0.43, lat. 0.24. Femur: long. 0.93; lat. 0.24. Tibia: long. 0.74; lat. 0.31. Hand: long. 0.64; lat. 0.43. Fingers: long. 1.00 mm.

Localities. Yamanaka, March, 1905, 6 specimens; 1 ♂, 5 ♀; Kanagawa, a very young specimen, in all probability belonging to this species.

### *Subgenus Obisium, s. s.*

#### *Obisium pygmaeum*, nov. sp.

Four small eyes, two on each side, about  $\frac{1}{2}$  diameter from each other, the anterior one about one diameter from the front margin.

Colour. The whole animal a pale reddish brown, abdomen above and below with round, whitish spots; the legs whitish.

Cephalothorax about as long as it is broad, nearly parallel-sided, a little narrower in front of the eyes; the front margin slightly convex, in the middle with a small, though distinct tooth; the surface smooth and glossy with short, pointed hairs.

Abdomen smooth and glossy with long, pointed hairs in rows along the hinder margins with some longer ones intermixed on the last somite.

Palps as long as the body, rather robust, smooth and glossy, except the hand, which is slightly granulated. The hairs of the palps are pointed, those of the inner side a little longer than those of the outer. — Trochanter with a short, robust, indistinct

stalk, as long as it is broad, the inner side somewhat convex, the outer side slightly concave. Femur robust, with a short, robust, but distinct stalk, the inner side slightly convex, a little concave towards the extremity, the outer side very slightly convex or nearly straight, femur, on the whole nearly parallel-sided, straight, not curved. Tibia with a robust, distinct stalk, and with the exception of the stalk, broadly oblong, the outer side regularly and moderately convex, the inner side diverging from the stalk, and then very convex, the membrane passing about  $\frac{1}{3}$  backwards. Hand with a short stalk, convex on both sides from rounded base, most so on the inner side. Fingers robust, somewhat curved, as long as the hand, with a row of small, truncated teeth on the inner margins, closely set and of equal height.

Mandibles. The moveable finger with no protuberance on the outer side, though sometimes with a slight indication of one.

Legs with long, pointed hairs, the femora of the two posterior pairs moderately broad. The coxa of the 1st pair with a small, blunt, brown tooth on the outer corner. Claws simple.

Length 1.2 mm.

Measurements. Cephalothorax: long. 0.39; lat. 0.37. Femur: long. 0.36; lat. 0.13. Tibia: long. 0.21; lat. 0.16. Hand: long. 0.28; lat. 0.21. Fingers: long. 0.28 mm.

Localities. Negishi, February, 1905, 3 specimens; Okayama, September, 1904, 1 specimen (very young); Kanagawa, February, 1905, 1 specimen (very young).

The new species has very great affinity to *Obisium brevifemorum* ELLINGSEN, from Norway, and indeed it is very difficult, even when comparing them, to find essential differences between the two species. The probability, however, that the same species lives in two such widely separated regions, is small. It should also be taken into consideration, that the Japanese specimens are rather young.

The principal differences between the two forms are as follows: the Japanese form is considerably smaller than the Norwegian; the

whitish spots on the upper and lower sides of the abdomen in the new species are entirely absent in the Norwegian species, which is moreover on the whole, of a darker colour. The fingers in this species are proportionally longer, the trochanter somewhat longer and provided with a longer stalk; the stalk of the femur passes more gradually into the femur (particularly on the outer side) than it does in the Japanese species, the stalk being thus more pronounced in the latter.

### ***Genus Chthonius.***

#### *Subgenus Chthonius, s. s.*

##### *Chthonius japonicus, nov. sp.*

Four eyes, two on each side, more than a diameter distant from each other, the anterior one about one diameter from the front margin; the anterior eye is well developed and elevated, the posterior one sometimes less distinct and lower.

Colour. Cephalothorax, mandibles, sclerites and palps (except the hand) pale reddish brown, the hand dark olivaceous brown; legs and the interstitial parts whitish, as are also the two anterior tergites.

Cephalothorax about as long as it is wide in front, narrowing considerably towards the back; the lateral margins slightly convex, the front margin straight, in the middle with a distinct tooth, on each side of this a long, dark-coloured bristle. The surface smooth and glossy, with some long, robust, pointed hairs along the margins.

Abdomen. The sclerites slightly striped transversally (it can scarcely be called shagreening), glossy.

Palps slender, smooth and glossy; the hairs strong and pointed, longer on the inner side than on the outer. — Trochanter with hardly visible stalk, the inner side slightly convex, the outer side slightly concave; gradually increasing in width. Femur with indistinct stalk, the inner side straight, but with the usual,

short sinuation at the base, the outer side a little widened at the base and the extremity, straight along the greater central part. Tibia, as usual, calyciform. Hand with no stalk, the outer side nearly straight or slightly convex, the inner side somewhat widened at a little distance from the base, and then nearly straight, passing evenly into the fingers; the hand on the whole is slender and nearly parallel-sided. Fingers of equal length, seen from above slightly curved, much longer than the hand; the fixed finger, throughout the whole length of the inner margin, has a row of strong, acutely triangular teeth, at a considerable distance from each other; the moveable finger has only some low teeth in the distal third part.

Mandibles. The moveable finger is a little swollen exteriorly at the rounding, the inner margin being provided with small teeth; the fixed finger has teeth along the proximal two thirds of the inner margin, increasing in size distally.

Legs with long, pointed hairs. The femora of the two posterior pairs very broad. Claws simple.

Length 1.33 mm.

Measurements. Cephalothorax: long. 0.43; lat. in front 0.47; behind 0.36. Mandibles: long. 0.36. Femur: long. 0.57; lat. 0.13. Tibia: long. 0.22; lat. in the extremity 0.13. Hand: long. 0.30; lat. 0.17. Fingers: long. 0.53 mm.

Localities. Ooyama, July, 1905, 5 specimens; Negishi, February, 1905, 1 specimen.

This species has great affinity to *CH. WLASSICSI* Daday, from New Guinea, but the tooth in the front margin of the cephalothorax in this species is much larger, and in the Japanese species I have not been able to detect the crenulated claws of the legs, nor the split hairs of the coxa of the 2nd pair of legs, peculiar to Daday's species.

*Chthonius opticus*, nov. sp.

Four large, elevated eyes, two on each side, scarcely a diameter from each other, the anterior one a diameter from the front margin; the eyes are placed on the anterior and posterior sides of a small, dark-coloured protuberance, the anterior eye thus looking forwards, and the posterior one backwards.

Colour. Cephalothorax, mandibles and palps pale reddish brown, the sclerites brown; legs and the interstitial parts whitish.

Cephalothorax about as long as it is broad in front, narrowing greatly backwards (in the male somewhat less so), the lateral margins slightly convex, the front margin straight, slightly sinuated and depressed in the middle, with no traces of teeth. The surface smooth and glossy with some long, pointed hairs.

Abdomen. The surface of the sclerites somewhat uneven, scarcely shagreened, glossy, with some hairs along the hinder margins.

Palps smooth and glossy; the hairs strong and pointed, somewhat longer on the inner side than on the outer. — Trochanter with no stalk, very short, the inner side very convex, short and rounded behind. Femur with scarcely visible stalk, the greater, central part of the inner side slightly concave, somewhat thickened at the base and the extremity, nearly straight behind, only slightly convex nearest the extremity. Tibia, as usual, calyciform. Hand with hardly visible stalk, short and thick, the inner side very convex, behind slightly convex; on both sides passing somewhat abruptly into the fingers. Fingers twice as long as the hand (in a younger, paler specimen even  $2\frac{1}{2}$  times as long), seen from above nearly straight, the moveable finger distinctly shorter than the fixed one; in the vertical plane the fingers are distinctly curved outwards, thus making an opening between them when the fingers are shut; the inner margins of the fingers with separated, pointed teeth, on the fixed finger long and narrow, on the moveable one considerably shorter; the interstices between the teeth are at least three times the width of a tooth.



Mandibles very large, the moveable finger slightly thickened at the rounding, the interior margin with some minute teeth in the central part; in the central part of the fixed finger there is a group of teeth, of which the posterior one is very large, the rest considerably smaller and of about equal size.

Legs with pointed hairs; the coxæ of the 1st pair narrowing towards the front and prolonged into a marked protuberance, provided with a comb-like row of protracting, divergent bristles, set close together. The femora of the two posterior pairs of legs moderately broad. Claws simple.

Length 1.90 mm.

Measurements. Cephalothorax: long. 0.47; lat. in front 0.51; behind 0.37. Mandibles: long. 0.43. Femur: long. 0.71; lat. at the extremity 0.16. Tibia: long. 0.29; lat. distally 0.16. Hand: long. 0.43; lat. 0.29. Fixed finger: long. 0.86 mm.

Locality. Okayama, September, 1904, 3 specimens.

The most distinctive characters in which this species differs from other species of *Chthonius*, are the protruding eyes, the shape of the teeth on the fixed finger of the mandibles and the peculiar protuberance on the coxa of the 1st pair of legs.